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10/660,071	09/11/2003	Koichi Kondo	03555/LH	6183

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EXAMINER

FALASCO, LOUIS V

ART UNIT PAPER NUMBER

1773

DATE MAILED: 02/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/660,071

Applicant(s)

KONDO ET AL.

Examiner

Louis Falasco

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) 15-46 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>09/11/03</u> . | 6) <input type="checkbox"/> Other: _____ |

PAPERS RECEIVED

- Applicants' Information Disclosure Statement received 09/11/03
- Applicants' Response to Restriction received 12/23/04

CLAIMS

The claims are 1 to 36.

Applicant's have elected, without traverse, of claims 1 -14 in the reply filed on 12/23/05.

Claims 15 - 36 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention.

The claims under consideration are 1 to 14.

ACTIONS

Statutory Basis

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Rejections

1. Regarding claims 1-12, the use of the term "analogous" in independent claim 1 renders the claims indefinite; the term includes elements not actually disclosed, to a degree rendering the scope of these claims unascertainable. MPEP § 2173.05(d).

The specification lacks an unambiguous standard for measuring the breadth *analogous* is intended to include. *Ex parte Oetiker*, 23 USPQ2d 1641 (Bd. Pat. App. & Inter. 1992). *Ex parte Caldwell*, 1906 C.D. 58 (Comm'r Pat. 1906); it's not clear from the specification which properties had to be compared to draw this analogy. There is insufficient guidance as to the meaning of the term "analogous" and how comparable properties would have to be compared to resolve infringement issues.

2. Claims 3, 4(3), 6 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims recite the limitation "constituent". This term has no sufficient antecedent basis. Maybe applicants meant grains or constituents, an appropriate correction is required.

3. Claims 9 and 10(9) are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 9 the Co content has by a value of Co/(Fe+Ni+Zn+Co) by molar ratio, of '0/3 or more and 0.3/3 or less', the "and" conjunction presents ambiguity as to alternatives covered by the claims with the differing limitations and 0/3 no Co.

Statutory Basis

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

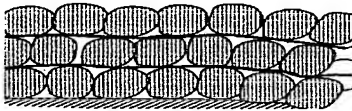
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Rejections

1. Claims 1, 8, 9, 10, 11 and 12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, 35 U.S.C. 103(a) as being unpatentable over either **Abe** (US 20040238796 or PCT WO 03/015109¹) or **Fleming et al** (US 20030003324).

¹ US 20040238796 has been established as a translation of Japanese language PCT WO 03/015109 by US 20040238796 application SN 10/486285

Abe teaches a ferrite film of magnetized grains as being to a regularly arranged to minimize random gaps between grains - paragraph [0036] '796 and as evident in the

figures - Fig 1C or 5B  . **Abe** teaches this arrangement to enhance anisotropy and better provide saturation magnetization.

- Regarding claims 8 and 12 where the ferrite film includes Ni, Zn, Fe and O, see **Abe** paragraph [0031] NiZn ferrite with oxygen, **Abe** paragraph [0044] [0070] and oxygen addition to the Ni, Zn, ferrite, **Abe** Example 2.
- Regarding claim 9 where the ferrite film may include Co, the content of Co by molar ratio $\text{Co}/(\text{Fe}+\text{Ni}+\text{Zn}+\text{Co})$ being (*sic*) equal to 0/3 or more and 0.3/3 or less see **Abe** paragraph [0025].

Fleming et al teaches a ferrite film of magnetized grains that are evenly arranged, as evident from paragraph [0013], where consistency occurs throughout the width of the ferrite film promoting anisotropy in the film - paragraph [0018].

- Concerning claims 8 and 9, where the ferrite film includes Ni, Zn, Fe and O see paragraph [0036], for Co ion addition - paragraph [0037] and for oxidation see paragraph [0016].
- Regarding claims 10, 11 and 12, which including Co and the ferrite film constituent having a uniaxial anisotropy, see **Abe** paragraph [0071] with [0030] [0031] and **Fleming et al** paragraphs [0004] [0008] with [0024] [0032] and the effect of Co doping in **Abe** paragraph [0037] and in **Fleming et al** paragraph [0037]. As to anisotropy, this is a property due of presence of Co ions as shown by **Abe** and **Fleming et al**. An inherent property does not

impart patentability to the claims. Claiming of a new or unknown property inherently present in the prior art does not necessarily make the claim patentable. "The discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition patentably new to the discoverer." *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999) also see *In re Best*, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977).

2. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Abe** or **Fleming et al** as applied to claims 1, 8, 10, 11 and 12 above, and further in view of **Tamari et al** (US 6159594).

Alternate to **Abe** or **Fleming et al** anticipating or alone rendering obvious the subject matter of claim 9 as previously explained, including Co in a ferrite film is conventional as further shown by **Tamari et al**, where the inclusion of Co has been included to control the coercivity of the recording medium (**Tamari et al** col. 5 lns 8-11). This is a result of Co ion distribution in the media (**Tamari et al** col. 5 lns 32-36). **Tamari et al** discloses the Co content with the Co/(Fe+Ni+Zn+Co) molar ratio 0/3 - 0.3/3 (**Tamari et al** col. 5 lns 32-34).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to adopt the inclusion of Co in a ferrite film as taught by **Tamari et al** in either **Abe** or **Fleming et al** for the purpose of controlling media coercivity. If not inherently met already by **Abe** or **Fleming et al**, one skilled in the art would have been

motivated to adopt **Tamari et al** inclusion of Co in a ferrite film in **Abe** or **Fleming et al** with the expectation of increasing control over the coercivity of the recording media.

3. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Abe** or **Fleming et al** either one with **Tamari et al** as applied to claims 9 above, and further in view of either **Futamoto et al** (US 6544672) or **Matsushita et al** (*IEEE Transcripts on Magnetics* vol. 38 no 5 (September, 2002) Ni-Zn-Co Ferrite Films).

Alternate to **Abe** or **Fleming et al** anticipating or at least rendering obvious having anisotropy resulting from a distribution of Co ions, **Futamoto et al** expressly teaches a ferrite film having anisotropy resulting from a distribution of Co ions (see col. 4 lns 54,55). Note *Embodiment 1* of **Futamoto et al**, with magnetic anisotropy measured by magnetic torque which varied with the distribution of Co in the ferrite film. The Co doped ferrite film had a preferred direction oriented along the path of easy magnetism. Likewise, **Matsushita et al** teaches a ferrite film in having anisotropy resulting the distribution of Co ions, this is evident from Fig. 3, with the ferrite film axis of *easy magnetization* parallel the thickness / in-plane direction of the ferrite thin film (**Matsushita et al** pg 3112 last paragraph).

If not inherently meet already by **Abe** or **Fleming et al**, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adopt the **Futamoto et al** or **Matsushita et al** where ferrite film anisotropy results from the distribution of Co ions in recording media of either **Abe** or **Fleming et al** to enhance

the coercive force of media. One skilled in the art would have been motivated to adopt **Futamoto et al** or **Matsushita et al** in **Abe** or in **Fleming et al** with the expectation of providing increasing control of magnetization.

In either case, applicants' discovery of an inherent anisotropy property does not impart patentability since claiming of a new or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999) also see *In re Best*, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977).

4. Claims 5 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, 35 U.S.C. 103(a) as being unpatentable over **Abe** (US 20040238796 or PCT WO 03/015109).

Abe teaches a ferrite film of magnetized grains / constituents where the ferrite film is magnetically isotropic, see paragraph [0035]. This magnetic ferrite material is

directed if desired as illustrated in Fig. 1C:



Alternatively, configuring magnetic orientation would have been an obvious matter of routine optimization or choice dependent on the system the media is to operate in. The person of ordinary skill in the art would have appreciated

coordinating the medium with the write / play head and have found it obvious to it compatible especially given the **Abe** desire to place isotropic ferrite in the magnetic film for such purpose. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

5. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Abe** as applied to claims 5 above, and further in view of **Fleming et al** (US 20030003324).

Abe does not specify the ferrite film where the constituent has uniaxial anisotropy. However **Fleming et al** teaches the (*sic*) 'constituent' of claim 6 [7(6)] having uniaxial anisotropy - see **Fleming et al** at paragraphs [0004] [0008], to increase the ferromagnetic resonance frequency, allowing operation at increased frequencies.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to adopt uniaxial anisotropy as shown by **Fleming et al** in the recording media of **Abe** for the purpose of controlling coercive force of the media. One skilled in the art would have been motivated to adopt **Fleming et al** in **Abe** with the expectation of increasing the frequencies over which the recording media could be employed.

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Tamari et al** (US 6159594).

Tamari et al teaches a ferrite film having a ratio of peak intensities matching a (222) crystal lattice plane and a (311) crystal lattice plane in an X-ray diffraction pattern of a surface of the film (**Tamari et al** col. 4 lns 2-4, col. 6 lns 11-15). Though **Tamari et al** does not limit its ferrite to I_{222}/I_{311} , ratio larger than 0.05, **Tamari et al** points out the smaller the spacing, the larger the coercive force becomes (**Tamari et al** col. 4 lns 32-38; col. 5 lns 13, 14). If not inherent in **Tamari et al**, which is silent on this, the exact ratio would have been an obvious matter of routine optimization or choice, as needed for instance to balance recording of recording density with a choice of writing head (**Tamari et al** col. 5 lns 56-61) or vary the spacing to accommodate greater or lesser H_c .

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Tamari et al** as applied to claims 13 above, and further in view of either **Abe** (US 20040238796) or **Fleming et al** (US 20030003324).

While **Tamari et al** does not specify a ferrite film having Ni, Zn, Fe and O composition, **Abe** and **Fleming et al** teach the ferrite composition – see **Abe** paragraph [0031] NiZn ferrite with oxygen added - **Abe** paragraphs [0044] [0070] also Example 2; or, see **Fleming et al** paragraphs [0036], [0037] with oxygen - paragraph [0016].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to adopt the Ni, Zn, Fe and O ferrite film composition in **Tamari et al** for increasing anisotropy and improving the magnetic permeability of the media.

One skilled in the art would have been motivated to adopt **Abe** or **Fleming et al**

composition with the expectation of greater signal to noise properties and increased magnetic resistivity - Abe [0012], Fleming et al [0005].

DOUBLE PATENTING

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

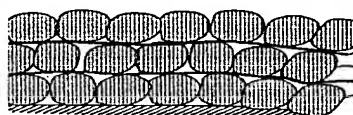
8. Claims 1, 5, 8, 9, 10, 11 and 12 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over

claims 1 to 8 of copending **Abe** Application No. 10/486285. Although the conflicting claims are not identical, they are not patentably distinct from each other.

In Sn 10/486285 the claimed *compression formed ferrite grains* are uniform paragraphs [0016] [0017] [0042] and as evident from figures - Fig 1C



and Fig. 5B



illustrates the result of

what has been claimed in **Abe** as a ferrite layer compression formed.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

- As to instant claim 5, **Abe** claims a ferrite film of magnetized grains / constituents where the ferrite film is magnetically isotropic, as evident in paragraph [0035]. This magnetic ferrite material is capable of directing as illustrated in Fig. 1C. Alternatively, configuring magnetic orientation would have been a matter of routine optimization or choice dependent on the system the media is in. The person of ordinary skill in the art would have appreciated coordinating the medium with the write/read head and have found it obvious to present a direct compatible with it especially given the **Abe** isotropic ferrite in the magnetic film as a recording medium. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).
- Regarding instant claims 8 and 12 where the ferrite film includes Ni, Zn, Fe and O, see **Abe** claimed film support in paragraph [0031] NiZn ferrite with oxygen,

paragraphs [0044] [0070] and Example 2 as support for the material in **Abe** claim 4.

- Regarding instant claim 9 where the ferrite film may include Co, the content of Co by molar ratio $\text{Co}/(\text{Fe}+\text{Ni}+\text{Zn}+\text{Co})$ being equal to 0/3 or more and 0.3/3 or less see **Abe** paragraph [0025] for the material of **Abe** claim 4.
- As to claim 10 reciting anisotropy, this is merely a property due of presence of Co ions see Co doping in **Abe** paragraph [0037] and claimed in **Abe** claim 6. An inherent property does not impart patentability to the claims. Claiming of a new or unknown property inherently present in the prior art does not necessarily make the claim patentable. *"The discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition patentably new to the discoverer."* Atlas Powder Co. v. Ireco Inc., 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999) also see In re Best, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977).
- Regarding claims 10, 11 and 12 which include Co and where the ferrite film constituent has a uniaxial anisotropy - see **Abe** paragraph [0071] with [0030] [0031] and the prior art effect of Co doping in **Abe** paragraph [0037] showing the type isotropy of **Abe** claim 6.

9. Claim 9 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of copending **Abe** Application No. 10/486285 as applied to claims 1, 5, 8, 9, 10, 11 and 12 above, and further in view of **Tamari et al** (US 6159594).

This is a provisional obviousness-type double patenting rejection.

Alternate to the claims of **Abe** Application No. 10/486285 alone rendering obvious the subject matter of claim 9 as explained previously, including Co in a ferrite film is conventional as further shown in **Tamari et al**. The inclusion of Co has been commonly included to control the coercive force of the recording medium as evident from **Tamari et al** (col. 5 lns 8-11) and results from a peculiar distribution of Co ions of magnetic media (**Tamari et al** col. 5 lns 32-36). **Tamari et al** discloses the Co content, with Co/(Fe+Ni+Zn+Co) molar ratio 0/3 - 0.3/3 (**Tamari et al** col. 5 lns 32-34).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to adopt the inclusion of Co in a ferrite film as in the **Tamari et al** recording media in the claims of **Abe** for the purpose of controlling media coercivity. If not inherently met already by the claims of **Abe**, one skilled in the art would have been motivated to adopt **Tamari et al** inclusion of Co in a ferrite film in **Abe** with the expectation of increasing control the coercivity of the recording media.

10. Claim 10 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of copending **Abe** Application No. 10/486285 in view of **Tamari et al** (US 6159594) . as applied to claims 9 above, and further in view of either **Futamoto et al** (US 6544672) or **Matsushita et al** (*IEEE Transcripts on Magnetics* vol. 38 no 5 (September, 2002) Ni-Zn-Co Ferrite Films).

This is a provisional obviousness-type double patenting rejection.

Alternate to claims 1 to 8 of **Abe** standing alone rendering obvious the subject matter of claim 10 having anisotropy resulting from a distribution of Co ions, **Futamoto et al** teaches a ferrite film having anisotropy resulting from a distribution of Co ions (see col. 4 lns 54,55) and note *Embodiment 1* of **Futamoto et al**, where magnetic anisotropy was determined by measuring magnetic torque which varied with the distribution of Co ions in the ferrite film, particularly note that the Co doped ferrite film had a preferred direction oriented along the path of easy magnetism. Similarly, **Matsushita et al** teaches a ferrite film in having anisotropy resulting the distribution of Co ions, as evident from Fig. 3 of **Matsushita et al**, with the ferrite film axis of *easy magnetization* parallel the thickness / in-plane direction of the ferrite thin film (**Matsushita et al** pg 3112 last paragraph).

If not inherently meet by the claims 1-8, particularly claim 6 of **Abe**, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adopt the **Futamoto et al** or **Matsushita et al** to have the ferrite film anisotropy resulting form the distribution of Co ions in recording media of the claims of **Abe** to vary the coercive force of magnetic media. One skilled in the art would have been motivated to adopt **Futamoto et al** or **Matsushita et al** in the **Abe** claims with the expectation of providing increasing control the direction of magnetization of the media.

In either case, applicants' discovery of an inherent anisotropy property does not impart patentability since claiming of a new or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. *Atlas Powder Co.*

v. Ireco Inc., 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999) also *In re Best*, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977).

11. Claims 6 and 7 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of copending **Abe** Application No. 10/486285 as applied to claims 1, 5, 8, 9, 10, 11 and 12 above, and further in view of **Fleming et al** (US 20030003324).

This is a provisional obviousness-type double patenting rejection.

The **Abe** claims, particularly claim 6, call for anisotropy but do not specify the ferrite film where the constituent has uniaxial anisotropy. However **Fleming et al** teaches the (*sic*) 'constituent' of claim 6 [7(6)] having uniaxial anisotropy - see **Fleming et al** at paragraphs [0004] [0008], to increase the ferromagnetic resonance frequency, allowing operation at increased frequencies.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to adopt uniaxial anisotropy as shown by **Fleming et al** in the recording media claimed in **Abe** for the purpose of increasing directional response of the media coercive force and optimizing the media to a record/play head. One skilled in the art would have been motivated to adopt **Fleming et al** in the claims of **Abe** with the expectation of increasing the frequencies of the recording media could be operated and optimizing the media direction with a head.

12. Claims 13 and 14 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of copending **Abe** Application No. 10/486285 as applied to claims 1, 5, 8, 9, 10, 11 and 12 above, and further in view of **Tamari et al** (US 6159594) and **Fleming et al** (US 20030003324).

This is a provisional obviousness-type double patenting rejection.

Tamari et al teaches a ferrite film having a ratio of peak intensities matching a (222) crystal lattice plane and a (311) crystal lattice plane in an X-ray diffraction pattern of a surface of the film (**Tamari et al** col. 4 lns 2-4, col. 6 lns 11-15). Though **Tamari et al** does not limit its ferrite to a I_{222}/I_{311} , ratio larger than 0.05, **Tamari et al** points out the smaller the spacing, the larger the coercive force becomes (**Tamari et al** col. 4 lns 32-38; col. 5 lns 13, 14). The exact ratio would have been an obvious matter of routine optimization or choice, for instance merely to balance recording of recording density with a choice of writing head (**Tamari et al** col. 5 lns 56-61) vary the spacing to accommodate greater or lesser H_c and S/N ratio.

Fleming et al teach the ferrite composition of these claims where the ferrite film includes Ni, Zn, Fe and O - see **Fleming et al** paragraphs [0036] [0037] with oxygen paragraph [0016].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to adopt the Ni, Zn, Fe and O ferrite film of **Tamari et al** in the ferrite recording medium of **Fleming et al** for increasing anisotropy and improving the

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magnetic permeability of the media in the claims of **Abe**. One skilled in the art would have been motivated to adopt **Tamari et al** and **Fleming et al** with the expectation of superior signal to noise properties and increased magnetic resistivity - **Fleming et al** [0005] **Tamari et al** col. 5 lns 56-61.

OTHER REFERENCES

Morita et al (US 5094897, US 5094898) are cited as being of interest further teaching peak intensity (222) crystal lattice plane and a (311) crystal lattice plane magnetic layer. **Taguchi et al** (US 6139766) is cited as being of interest further teaching ferrite magnetic media and the anisotropy in the direction of the 'easy axis' (col. 5 lns 45-65 and col. 7 lns 25,26).

CONCLUSION

The claims 1 to 14 have been acted on their merits.

- Election has been received, withdrawing claims 15 to 39 from consideration.
- Information Disclosure Statement has been received and considered in this action.
- No claim has been allowed in this action.

INQUIRES

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Louis Falasco whose telephone number is (571)272-1507. The examiner can normally be reached on M-F 10:30 - 7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah D. Jones can be reached on (571)272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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STEVAN A. RESAN
PRIMARY EXAMINER